

MEMORANDUM BY JAMES MING CHEN, LEGAL EXPERT

I am providing this Memorandum to Mr. Warren Havens, Skybridge Spectrum Foundation and related LLCs (herein together “SkyTel” or “plaintiffs”) for use in Havens et al. v Mobex et al., case No. 11-993 in the US District Court District of New Jersey (the “Case”), as a paid consultant. I am willing to testify as a paid consultant as to my opinions provided herein.

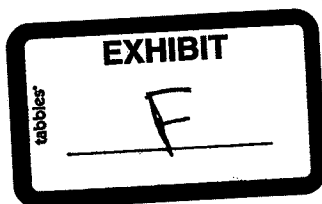
The opinions I set forth herein provide a reasonable degree of certainty under applicable professional legal and economic standards. In preparing this memorandum, I have reviewed the relevant materials and information indicated herein including plaintiffs’ operative Second Amended Complaint (or the “Complaint”) in this Case including the factual assertions therein, as expanded upon in documents (including various expert statements) listed and described in the Declaration of Warren Havens submitted in this case dated October 30, 2012 (“Havens Declaration”).

I. INTRODUCTION

My name is James Ming Chen. I am a professor of law at the University of Louisville. I served as that school’s dean from January 2007 through June 2012. After graduating *magna cum laude* from Harvard Law School in 1991, I clerked for Judge J. Michael Luttig of the United States Court of Appeals for the Fourth Circuit and for Associate Justice Clarence Thomas of the Supreme Court of the United States. I have worked full-time in legal education since 1993. My scholarship has often addressed the impact of technological change on competition and the behavior of incumbent firms in the face of competition.<sup>1</sup>

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<sup>1</sup> See, e.g., *Telecommunications Mergers*, in *Competition Policy and Merger Analysis in Deregulated and Newly Competitive Industries*, at 52-83 (Peter C. Carstensen & Susan Beth Farmer eds., 2008); *From Red Lion to Red List: The Dominance and Decline of the Broadcast Medium*, 60 Admin. L. Rev. 793 (2008); *The Echoes of Forgotten Footballs: Telecommunications Mergers at the Dawn of the Digital Millennium*, 43 Houston L. Rev. 1311 (2007); *The Death of the Regulatory Compact: Adjusting Prices and Expectations in the Law of Regulated Industries*,



Federal courts, including the Supreme Court of the United States, have cited my work.<sup>2</sup> So have federal and state regulators.<sup>3</sup> I invite the court to examine the

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67 Ohio St. L.J. 1265 (2006); *Around the World in Eighty Centiliters*, 15 Minn. J. Int'l L. 1 (2006); *Conduit-Based Regulation of Speech*, 54 Duke L.J. 1359 (2005); *The Nature of the Public Utility: Infrastructure, the Market, and the Law*, 98 Nw. U. L. Rev. 1617 (2004); *Subsidized Rural Telephony and the Public Interest: A Case Study in Cooperative Federalism and Its Pitfalls*, 2 J. on Telecom. & High Tech. L. L. 307 (2003); *The Vertical Dimension of Cooperative Competition Policy*, 48 Antitrust Bull. 1005 (2003); *The Price of Macroeconomic Imprecision: How Should the Law Measure Inflation?*, 54 Hastings L.J. 1375 (2003); *Liberating Red Lion from the Glass Menagerie of Free Speech Jurisprudence*, 1 J. on Telecom. & High Tech. L. 293 (2002); *The Authority to Regulate Broadband Internet Access over Cable*, 16 Berkeley Tech. L.J. 677 (2001); *Standing in the Shadows of Giants: The Role of Intergenerational Equity in Telecommunications Reform*, 71 U. Colo. L. Rev. 921 (2000); *The Magnificent Seven: American Telephony's Deregulatory Shootout*, 50 Hastings L.J. 1503 (1999); *The Second Coming of Smyth v. Ames*, 77 Tex. L. Rev. 1535 (1999); *Regulatory Education and Its Reform*, 16 Yale J. on Reg. 145 (1999); *TELRIC in Turmoil, Telecommunications in Transition: A Note on the Iowa Utilities Board Litigation*, 33 Wake Forest L. Rev. 51 (1998); *The Legal Process and Political Economy of Telecommunications Reform*, 97 Colum. L. Rev. 835 (1997); *Titanic Telecommunications*, 25 Sw. U. L. REV. 535 (1996); *The Last Picture Show (On the Twilight of Federal Mass Communications Regulation)*, 80 Minn. L. Rev. 1415 (1996). Most of these papers are available on my Social Science Research Network (SSRN) page, <http://ssrn.com/author=68651>. I have posted additional working papers on regulatory topics: *Merger to Monopsony: AT&T, T-Mobile, and the Clayton Act*, <http://ssrn.com/abstract=2130962>; *Postmodern Disaster Theory*, <http://ssrn.com/abstract=2141591>; *Creamskimming and Competition*, <http://ssrn.com/abstract=1395554>; *Price-Level Regulation and Its Reform*, <http://ssrn.com/abstract=771226>.

<sup>2</sup> See *Nixon v. Missouri Municipal League*, 541 U.S. 125, 138 (2004); *Alexander v. Cahill*, 598 F.3d 79, 99 (2d Cir. 2010); *WWC Holding Co. v. Sopkin*, 488 F.3d 1262, 1280 nn.3 & 6 (10th Cir. 2007) (Gorsuch, J., dissenting); *Cloverland-Green Spring Dairies, Inc. v. Pennsylvania Milk Marketing Bd.*, 462 F.3d 249, 252 (3d Cir. 2006); *MCI Telecommunications Corp. v. Public Serv. Comm'n of Utah*, 216 F.3d 929, 933 (10th Cir. 2000); *Qwest Broadband Servs., Inc. v. City of Boulder*, 151 F. Supp. 2d 1236, 1241 (D. Colo. 2001); *Wisconsin Bell, Inc. v. Public Serv. Comm'n of Wisconsin*, 27 F. Supp. 2d 1149, 1153 (W.D. Wis. 1998).

<sup>3</sup> See Remarks of Commissioner Meredith Attwell Baker, *Towards a More Targeted and Predictable Merger Review Process*, IPI Third Annual Communications Summit, 2011 WL 742244, at \*1 (F.C.C. March 02, 2011); *Rulemaking Regarding Whether to Adopt, Amend, or Repeal Regulations Governing the Retirement by Incumbent Local Exchange Carriers of Copper Loops and Related Facilities Used to Provide Telecommunications Services*, 2008 WL 4948603, at \*12 (Cal. Pub. Utils. Comm'n Nov. 06, 2008) (Nos. D. 08-11-033, R. 08-01-005).

history of my participation in judicial and regulatory proceedings<sup>4</sup> and to review my *curriculum vitae*.<sup>5</sup>

I submit this Memorandum on behalf of the plaintiffs in *Havens v. Mobex Network Services, LLC*, Civ. Action No. 11-993 (D.N.J. filed Feb. 18, 2011). In its opinion of December 22, 2011, the United States District Court for the District of New Jersey denied the defendants' motion to dismiss the complaint with respect to the plaintiffs' claim under section 1 of the Sherman Act, 15 U.S.C. § 1. I agree with that aspect of the court's decision. After reciting the factual background of this controversy, I will explain why I believe that the plaintiffs have stated a valid section 1 claim. The defendants have engaged in a "contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States." *Id.* The plaintiffs have satisfied each element of a section 1 claim. Moreover, the plaintiffs have been "injured in [their] business or property by reason of" the defendants' antitrust violation. 15 U.S.C. § 15.

## II. FACTUAL BACKGROUND<sup>6</sup>

America's transportation and energy industries are rapidly adjusting their operations in anticipation of smart wireless networks. Railroad and other transportation companies, electric power utilities, and oil and gas exploration and production facilities demand rapid, cost-effective wireless networks to facilitate the operation of their extensive mobile fleets and to power intelligent systems such as electric-infrastructure "smart grids," and a host of roadway "Intelligent

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<sup>4</sup> See <http://www.jimchen.org/p/legal-experience.html>.

<sup>5</sup> See <http://www.jurisdynamics.net/files/documents/JimChenCV.doc>.

<sup>6</sup> For supporting documents and details with relevant facts summarized herein, see the Havens Declaration identified above, including its list and summary of scores of documents, and introduction and summary of five expert statements submitted for this case concurrently with this Memorandum. Most of these documents and expert statements support various elements of this Memorandum. The Havens Declaration describes the relevance of these documents and statements to the elements of the plaintiffs' claim under § 1 of the Sherman Act, which is the subject of this Memorandum. This Memorandum, by this note, therefore incorporates by reference all of the foregoing documents and expert statements in their entirety. This Memorandum will also cite some of these documents and statements. If I am called upon to testify during a later stage of this litigation, I can provide further references to particular documents and parts thereof in support of my opinion.

Transportation Systems” (ITS). Wide-area, cost-effective wireless coverage for smart transport and energy systems requires low-frequency-range spectrum with long-range coverage capabilities reserved for the exclusive use of those systems. *See generally* Shpigler Group, *Smart Energy & Transport Wireless — 2010 Survey of 70 Power Utilities* (July 26, 2010) (commissioned by ATLIS Wireless) (available online at <http://bit.ly/ATLISWireless>).<sup>7</sup>

The plaintiffs are pioneers in developing advanced wireless networks required for regional and nationwide smart transportation and energy systems, and complementary environment-protection systems. In short, the plaintiffs are developers of smart infrastructure and environment. This is the “product” element of the market in this case. At a minimum, the geographic footprint of this market is nationwide. These infrastructure systems are nationwide and interdependent; the natural environment is not merely nationwide, but global. This market affects a significant portion of the entire United States economy.

The plaintiffs have done their utmost to assemble all the elements of a network that can provide wireless communications to serve a wide variety of smart transport, energy, and environmental systems. In particular, they have devoted their efforts to securing the foundational element: the plaintiffs have purchased suitable FCC-licensed radio spectrum in FCC auctions. The plaintiffs have also developed extensive engineering and business plans, and have made numerous other preparations in anticipation of burgeoning demand for smart infrastructure and environment.

Smart infrastructure depends almost entirely on wireless communications. Because of its superior propagation, especially at the lower power levels needed for more reliable and cost effective operations, spectrum in the lower 200 MHz range provides the ideal platform for wireless communications undergirding smart transportation, energy, and environment networks. Moreover, because spectrum on either side of this technological “sweet spot” is legally impaired — for example, by being designated for nonexclusive shared use or by being reserved for military use (in the case of the 225-400 MHz band) — Automated Maritime Telecommunications System (AMTS) is the only substantial radio service that fits

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<sup>7</sup> The Shpigler report is contained in the expert statement of David Shpigler presented by the Havens Declaration. The Havens Declaration and the other expert reports presented in the Havens Declaration further describe the technological requirements and the related product and geographic market definitions at issue in this case.

these requirements. *See generally* Havens Declaration (including its presentation of the reports and attached publications of four experts).<sup>8</sup>

AMTS enjoys a special advantage in providing High Accuracy Location (HALO), which is an essential component of smart infrastructure, especially Intelligent Transportation Systems (ITS). *See generally* Adam Goodliss, Raja Sengupta *et al.*, *Cooperative High-Accuracy Location (C-HALO) Service for Intelligent Transportation Systems: A Cost Benefit Study*, Proceedings of the 24th International Technical Meeting of the Satellite Division of the Institute of Navigation (ION GNSS 2011), at 2220-32 (September 2011) (available online at <http://bit.ly/C-HALO>).<sup>9</sup> Benefits from HALO are substantial. The Goodliss-Sengupta study estimates that the United States stands to gain \$160 billion to \$320 billion per year in additional gross domestic product solely on the basis of HALO-enabled improved highway safety and traffic flow. *See id.* As matters stand, roadways are already one of the largest users of electric power, for lighting and signals. In addition, roadway traffic use of electricity for electric-drive vehicles is growing substantially. These demands will increase with the acceleration and diffusion of smart transport. *See generally Smart Cities: Intelligent Transportation and Smart Grid Standards — Part 1*, Alternative Energy eMagazine, <http://bit.ly/SmartCities1>.<sup>10</sup>

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<sup>8</sup> The following is described in the Havens Declaration and in the documents that it cites: This sweet spot for radio spectrum especially suitable (and thus viable in actual market deployments) for the subject market: wireless for smart infrastructure and environment, is based on technical characteristics of radio frequencies and availability (or not) of wide-area exclusive-rights licenses. For these technical reasons, these frequencies must be in the upper part of the VHF ("Very High Frequency") range from 30 to 300 MHz. In this range, the AMTS band in 217-220 MHz is the only band with major spectrum quantity and availability. This is reflected in the Federal Railroad Administration (FRA) report to Congress in August 2012 regarding needed new railroad wireless (identifying 217-222 MHz as the only suitable spectrum band). Moreover, the United States government has identified the Department of Defense's (DOD) exclusive use of 225-400 MHz spectrum as the only band that can satisfy the DOD's wide-area wireless needs analogous to the smart infrastructure and environment systems contemplated and pursued by the plaintiffs. The relevant reports by the FRA, DOD, and other agencies are identified by the Havens Declaration. Above 400 MHz does not have the long-range coverage required. Frequencies below the AMTS band, in the remainder of the high VHF band, are allocated to and used by TV stations, shared uses under 47 C.F.R. part 90, and the United States government. The lower part of VHF and spectrum with even lower frequencies have excessively long-range propagation, including ground and sky waves that make it unsuitable for multi-site, well-controlled wide-area wireless systems needed for smart infrastructure and environment systems. *See generally* Havens Declaration.

<sup>9</sup> This study is the basis of Dr. Sengupta's expert statement presented by the Havens Declaration. A recent version of the study is attached to Dr. Sengupta's statement.

<sup>10</sup> *See also* David Shpigler Statement (presented by the Havens Declaration).

HALO relies largely on RTK (real-time kinematic) corrections of GPS (and other Global Navigation Satellite System [GNSS]) readings for physical positioning of moving or stationary objects over very wide areas.<sup>11</sup> HALO represents a technologically significant enhancement of, alternative to, and improvement over unaided (and less augmented) Global Positioning Systems (GPS). To ensure consistent high accuracy, existing GPS technology must be significantly enhanced. Because GPS is easy to jam and spoof, especially when it is deployed by a provider of commercial GPS services, AMTS-enabled HALO promises the precise location and timing demanded by many industries, from core transportation and energy infrastructure, to defense and public safety, banking and financial transactions, commercial supply logistics, etc.<sup>12</sup>

As with any other portion of the electromagnetic spectrum (other than those portions reserved for the use of the United States government), access to the AMTS band is controlled and licensed by the Federal Communications Commission (FCC). AMTS is a form of Commercial Mobile Radio Service (CMRS) licensed throughout the United States for the purpose of delivering voice and communications services to customers. AMTS was originally created for the benefit of maritime customers in coastal areas and along other navigable water routes. The low 200 MHz range was selected to provide reliable very long-range radio coverage over the nation's vast maritime-traffic areas along the coastlines and major inland waterways. AMTS has since been expanded to include land service nationwide, including the Northeast Corridor of the United States,<sup>13</sup> again providing this long-range coverage capability.

There are two categories of AMTS licenses: site-based and geographic. The FCC issues site-based licenses "on a first-come, first-served basis, at no cost (except for nominal application processing fees)." *Second Amended Complaint*, ¶

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<sup>11</sup> See Raja Sengupta Statement.

<sup>12</sup> Precise positioning is based upon precise timing: one or the other or both increasingly lies at the foundation of smart and secure industries. See Havens Declaration and the expert statements presented therein.

<sup>13</sup> The Complaint in this case describes the plaintiffs' programs to serve smart transportation systems in the Northeast Corridor, among other efforts. See generally Havens Declaration and the documents and expert statements presented therein. As the Havens Declaration explains by presenting the expert statement of railroad-communications expert Ron Lindsay, the Northeast Corridor programs include Amtrak, Metro North Railroad (in the New York City metropolitan area), New Jersey Transit, and the Massachusetts Bay Transportation Authority (MBTA, in the Boston metropolitan area).

17. These licenses are “site-based” in the sense that they permit operation solely at and near the one or more station location(s) specified in the license.

Until 2004, all AMTS licenses were site-based. That year, the FCC began to auction geographic AMTS licenses. A geographic license, once acquired from the FCC by a high bidder in a public auction, grants to the licensee the exclusive use of the radio frequencies specified in that license for the purpose of constructing and operating networks of wireless telecommunications stations within a wide geographic area defined by the license.

This case hinges on the defendants’ concerted misuse, abuse and violation of FCC rules and orders designed to manage an orderly legal and technological transition from an AMTS market based entirely on site-based licenses to one based on broader geographic licenses or even on vast networks combining geographic licenses. In order to shield *valid* incumbent site-based licenses’ operations within the much large area covered by a geographic license using the same spectrum (sometimes called “co-channel” spectrum), FCC regulations and related orders entitle holders of site-based licenses to continue station operations free of technically defined radio interference from the surrounding co-channel geographic license. Consequently, the FCC requires a physical buffer that imposes some distance between (on one hand) the stations built and operated by a geographic licensee and (on the other hand) stations lawfully operated on the same frequencies by an incumbent site-based AMTS licensee. The distance required is the shorter of 120 kilometers and the actual computer-predicted transmitting distance of the site-based station, as determined by a highly specific, technological algorithm. *See* 47 C.F.R. § 80.385(b). Critically, if a site-based license is terminated, revoked, or found invalid by the FCC, the radio frequencies covered by that site-based license will revert to the overlapping geographic license for that area. *See* 47 C.F.R. § 80.385(c).

The plaintiffs hold geographic AMTS licenses covering most of the United States, including New Jersey. By contrast, the defendants hold site-based AMTS licenses around the country, including New Jersey. The plaintiffs and the defendants (not to put too sharp a point on it) are direct competitors in any legally, economically, or technologically meaningful sense of that term.

The plaintiffs allege that the defendants have committed a wide variety of anticompetitive acts. The FCC’s rules governing AMTS contemplate some accommodation of legitimate operations by incumbent site-based licensees even as geographic licensees deploy facilities and networks made feasible by the

accumulation of physical and economic scale. Toward that end, those rules direct site-based licensees to provide information to geographic licensees so that the geographic licensees may calculate the transmitting distance of an overlapping site-based station.

The plaintiffs complain that the defendants have wrongfully withheld the information that plaintiffs, as geographic AMTS licensees, would need in order to determine the protected contour of the defendants' site-based stations. Despite FCC regulations requiring disclosure and three "cooperation orders" specifically directing the defendants to act, the defendants have denied this information to the plaintiffs. The plaintiffs argue that the defendants' refusal to disclose arises from the defendants' anticompetitive desire to undermine the plaintiffs' efforts to use their geographic licenses to develop nationwide smart infrastructure and environment networks.

According to the plaintiffs, the defendants have waged a grand campaign of deception. Even though FCC regulations require site-based AMTS licensees to build stations within two years, the defendants have not actually built those stations. As a result, the defendants have refused to disclose the operating contours of their stations because such disclosure would expose the legally and economically devastating fact of those stations' nonexistence. In the absence of the defendants' fulfillment of the requirement that they build stations within two years, FCC regulations would direct the reversion of site-based license rights to the plaintiffs as the Geographic licensees for the relevant region.

Further, as the initial stage of defendants' campaign, as described in the Complaint,<sup>14</sup> defendants spuriously maintained in the formative pre-auction years of AMTS before the FCC, their competitors the plaintiffs, and the market scores of invalid AMTS licensed stations in many important urban and transportation areas that had automatically terminated due to defendants' failure to timely construct and keep in operation these stations as required under FCC rules. This was shown in the FCC year 2004 "audit" of the defendants' AMTS licenses described in the Complaint. This artificially blocked plaintiffs from competing to obtain pre-auction AMTS licenses, restrained their efforts and results in obtaining financing for the AMTS auctions, and in other ways restrained their efforts to obtain and use AMTS spectrum to address the market defined herein.

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<sup>14</sup> See paragraphs 34, 42, 57(c) and (g), 59(b) and (c), 61, 64, and 65.



In essence, the defendants have engaged in a practice known as the “warehousing” of electromagnetic spectrum. Warehousing “occurs when a party acquire[s] spectrum licenses without the intent to utilize them lawfully,” electing instead to “‘squat’ on the spectrum until a buyer is found.” *Second Amended Complaint* ¶ 31. The balance of this memorandum will explain in greater detail how the defendants’ “warehousing” of site-based AMTS licenses constitutes anticompetitive conduct in violation of section 1 of the Sherman Act.

### III. LEGAL ANALYSIS

Three aspects of the court’s December 22, 2011, opinion lie beyond dispute. First, federal communications law does not preempt the plaintiffs’ right to assert a claim under section 1 of the Sherman Act. Second, the plaintiffs have suffered injury of a sort that confers standing to sue under sections 4 and/or 16 of the Clayton Act, 15 U.S.C. §§ 15, 26. Finally, the defendants have acted in concert, thereby satisfying section 1’s requirement of a “contract, combination . . . , or conspiracy.” 15 U.S.C. § 1.

In its December 22 opinion, the district court properly declined the defendants’ invitation to rule that the Communications Act of 1934<sup>15</sup> preempts plaintiffs’ antitrust claims. Congress has expressly contemplated that the Communications Act and the antitrust laws would coexist and operate in parallel fashion. Section 601(b)(1) of the Telecommunications Act of 1996 specifically provides that “nothing in this Act or the amendments made by this Act shall be construed to modify, impair, or supersede the applicability of any of the antitrust laws.” Act of Feb. 2, 1996, Pub. L. No. 104-104, § 601(b)(1), 110 Stat. 56, 143 (codified at 47 U.S.C. § 152 note). The Telecommunications Act defines the Sherman Act as one of the “antitrust laws” covered by this provision. *See id.* § 601(e)(4), 110 Stat. at 144. The Supreme Court has construed the “saving clause” in section 601(b)(1) as one that “preserves those ‘claims that satisfy established antitrust standards.’” *Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko*, 540 U.S. 398, 406 (2004).

The court also correctly concluded that the plaintiffs have standing to sue the defendants for their violations of section 1. Section 4 of the Clayton Act

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<sup>15</sup> Act of June 19, 1934, Pub. L. No. 73-416, 48 Stat. 1064 (codified as amended at 47 U.S.C. §§ 151-1473).

provides that “any person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws” may sue to “recover threefold the damages by him sustained, and the cost of suit, including a reasonable attorney’s fee.” 15 U.S.C. § 15. This provision requires a private antitrust plaintiff to “prove *antitrust* injury” — “injury of the type the antitrust laws were intended to prevent and that flows from that which makes defendants’ acts unlawful.” *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 489 (1977) (emphasis in original). Antitrust injury “should reflect the anticompetitive effect either of the violation or of anticompetitive acts made possible by the violation.” *Id.*; accord *Eichorn v. AT&T Corp.*, 248 F.3d 131, 140 (3d Cir. 2001).

The court correctly rejected defendants’ contention that plaintiffs sued solely to vindicate “injury to their status as competitors rather than an injury suffered by the overall competitive market.” Opinion of December 22, 2011. The antitrust injury requirement leaves ample room for plaintiffs to challenge “practice[s] that harm[] both competitors and competition.” *Cargill, Inc. v. Monfort of Colorado, Inc.*, 479 U.S. 104, 117-18 (1986). It remains incumbent upon federal courts to allow “competitors ... to prove antitrust injury before they actually are driven from the market and competition is thereby lessened.” *Brunswick*, 429 U.S. at 489 n.14; accord *Cargill*, 479 U.S. at 118 n.13.

The defendants have impaired competition in the AMTS market. The anticompetitive effects of their actions are felt not only in discrete geographic markets, but throughout the national market for AMTS. Defendants have refused to provide the FCC with critical information about the contours of operations under their site-based licenses. This refusal, spurred by a desire to prevent the forfeiture of their licenses, advances the defendants’ ultimate goal of warehousing their site-based AMTS licenses in order to devalue neighboring geographic licenses held by plaintiffs. Successful warehousing of site-based AMTS licenses would reduce the economic value of competing geographic licenses, thereby enabling defendants as incumbent site-based licensees to reduce competition in AMTS auctions and perhaps to submit winning bids at lower prices. Warehousing is directly analogous to predatory pricing and other forms of anticompetitive conduct that the Supreme Court has condemned as “inimical to the purposes of the antitrust laws.” *Brunswick*, 429 U.S. at 488; cf. *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.*, 549 U.S. 312, 320-21, 325-26 (2007) (equating predatory bidding with predatory pricing as objectionable conduct within the reach of the Sherman Act). Seen through the lens of

competition within the AMTS market, the warehousing of licenses plainly is a practice “capable of inflicting antitrust injury.” *Cargill*, 479 U.S. at 118.

Reporting the nature, scale, and scope of the injury that the defendants’ warehousing of AMTS spectrum is tantamount to stating the economic injury that these defendants have inflicted, not only upon the plaintiffs as competitors, but also upon the antitrust laws’ fundamental interest in competition within the AMTS market and in the robust development and diffusion of smart infrastructure and environmental systems. The unlawful blocking of the plaintiffs’ geographic licenses literally stops product development and delivery. Even where the plaintiffs succeed, as a strictly technological matter, in making full use of their geographic AMTS licenses, the defendants’ warehousing conduct drives up the price that the plaintiffs must charge their customers.<sup>16</sup> Warehousing slows delivery of service. It decreases quality by converting squatted-upon areas within incumbent site-based AMTS licenses into “holes” within what the plaintiffs and their (prospective) customers demand: ubiquitous, continuous coverage across very wide areas. The defendants’ conduct ultimately drives the plaintiffs’ strategic partners toward technologically inferior solutions for smart infrastructure systems. What the plaintiffs experience as an economic loss is felt by their customers — and by the United States economy at large — as a blow to economic development and adoption of new technology.

The court was also correct to conclude that plaintiffs satisfied the elements of a section 1 claim. The plaintiffs have certainly demonstrated concerted action. The statutory formulation of a “contract, combination ... or conspiracy” confines section 1 of the Sherman Act to concerted rather than independent or unilateral action. See *American Needle, Inc. v. National Football League*, 130 S. Ct. 2201, 2208 (2010); *Copperweld Corp. v. Independence Tube Corp.*, 467 U.S. 752, 767 (1984); see also *Howard Hess Dental Laboratories, Inc. v. Dentsply Int’l Inc.*, 602 F.3d 247, 254 (3d Cir. 2010) (requiring a plaintiff asserting a section 1 claim to prove four elements: “(1) concerted action by the defendants; (2) that produced anti-competitive effects within the relevant product and geographic markets; (3)

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<sup>16</sup> The defendants’ behavior therefore falls into a category that antitrust law scholars have condemned as “raising rivals’ costs.” See, e.g., Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals’ Costs to Achieve Power Over Price*, 96 Yale L.J. 209, 234 (1986); Edward A. Snyder & Thomas E. Kauper, *Misuses of the Antitrust Laws: The Competitor Plaintiff*, 90 Mich. L. Rev. 551, 561-63 (1991).

[proof] that the concerted action [was] illegal; and (4) [proof that the plaintiff was injured as a proximate result of the concerted action”).

As a threshold matter, we may wish to consider whether to evaluate the plaintiffs’ Sherman Act claim under a *per se* approach or under the rule of reason. The practice of warehousing, or the hoarding of FCC-regulated electromagnetic spectrum, has long raised competitive concerns. Any system of spectrum allocation on any basis besides an auction — including the FCC’s traditional “public interest” allocation system or the later alternative of lotteries — invites the most unscrupulous recipients of commercial spectrum to hoard unused spectrum for profitable later resale. See Ira Barron, *There’s No Such Thing as a Free Airwave: A Proposal to Institute a Market Allocation Scheme for Electromagnetic Frequencies*, 9 J. Legis. 205, 214 (1982). Well before the advent of competitive auctions for commercial spectrum, the FCC has adopted and enforced anti-warehousing rules. See, e.g., *Amendment of Part 90, Subparts M and S, of the Commission’s Rules*, 3 F.C.C.R. 1838, 1844-46 (1988), revised, 4 F.C.C.R. 356 (1989); *Revision of Part 21 of the Commission’s Rules*, 2 F.C.C.R. 5713 (1987) (imposing a timetable for construction deadlines on allocated spectrum), modified, 4 F.C.C.R. 2287 (1989). Concerns over “greenmail” by spectrum squatters motivated Congress to abolish lotteries and to direct the FCC to implement competitive auctions for commercial spectrum. See *Implementation of § 309(j) of the Communications Act, Competitive Bidding*, 9 F.C.C.R. 7373, 7375-76 (1994). Those concerns now take the form of a specific FCC rule against greenmail. See 47 C.F.R. § 1.935.

Antitrust law should and can neutralize the anticompetitive impact of warehousing. The Antitrust Division of the Department of Justice has advocated the application of antitrust law to counteract the anticompetitive impact of the hoarding and warehousing of spectrum. See, e.g., Department of Commerce, National Telecommunications Information Agency, *U.S. Spectrum Management Policy: Agenda for the Future* (1991) (available online at <http://www.ntia.doc.gov/osmhome/91specagen/1991.html>) (text accompanying note 404) (quoting the Department of Justice, Antitrust Division, as recognizing the applicability of antitrust law to hoarding behavior by holders of FCC-licensed commercial spectrum).

At an absolute minimum, of course, the court may evaluate anticompetitive potential of the defendants’ warehousing conduct under antitrust law’s familiar rule of reason. See, e.g., *NCAA v. Regents of the University of*

*Oklahoma*, 468 U.S. 85 (1984); *National Society of Professional Engineers v. United States*, 435 U.S. 679 (1978). Under the rule of reason, the defendants can show no countervailing pro-competitive benefits flowing from their conduct. They offer no competing services on the basis of their site-based AMTS licenses. The defendants' failure to comply with FCC regulations and orders requiring honest disclosure of operations under their site-based AMTS licenses blocks any downstream transfer or reassignment of their licenses pending the FCC's own evaluation of the defendants' legal violations. See *Jefferson Radio Co. v. FCC*, 340 F.2d 783 (D.C. Cir. 1964). The absence of countervailing competitive value ultimately invites the application of a *per se* rule. Because it is based on territorial characteristics set forth in site-based AMTS licenses issued by the FCC, the defendants' warehousing strategy falls squarely within the scope of the well established *per se* rule condemning the horizontal division of markets by territory. See *United States v. Topco Assocs.*, 405 U.S. 596, 608 (1972); *United States v. Sealy, Inc.*, 388 U.S. 350 (1967). The rule that the horizontal division of markets on a territorial basis is *per se* illegality applies with equal force to potential as well as actual competitors. See *Palmer v. BRG of Georgia, Inc.*, 498 U.S. 46, 49-50 (1990).

Whether the plaintiffs' claim of unlawful warehousing by the defendants is evaluated under a rule of *per se* illegality or under the rule of reason, the plaintiffs have successfully alleged a pattern of conspiratorial, anticompetitive conduct by the defendants. The plaintiffs have readily satisfied the requirement that they "state a claim to relief that is plausible on its face" and plead sufficient "factual content [to] allow[] the court to draw the reasonable inference that the defendant[s] [are] liable" under section 1 of the Sherman Act. *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009); see also *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 556, 570 (2007). The defendants made a spectrum-splitting arrangement so that each site-based AMTS licensee among them could reap some benefit from the combined value of their AMTS licenses. Mobex and PSI, as collaborators in the entire warehousing effort, had an intertwined financial stake in the disputed AMTS licenses. Mobex and PSI went so far to as to locate antenna sites and even radio station components at the same sites in order to reduce their costs.

Although the defendants have succeeded in blocking the plaintiffs in discerning the (mostly nonexistent) contours of the defendants' site-based AMTS operations, the plaintiffs have established the contours of their geographic and product markets. This market is nationwide by nature. To succeed, a wireless

network serving smart transportation, energy, and environment systems must be all-encompassing. If the network lacks substantial geographic portions, the market will stall and eventually fail. A critical mass of the essential ingredients must be available. The core ingredient is licenses in suitable wireless spectrum — namely, the geographic AMTS licenses that plaintiffs hold and hope to acquire.

The plaintiffs' initial relevant geographic market is all major cities and major transportation corridors in the United States. Eventually, the plaintiffs hope to make their network ubiquitous on a nationwide basis. Far more than existing commercial mobile radio services, smart infrastructure and the wireless networks that enable it must be ubiquitous. Transportation and energy systems go everywhere. The natural environment, which after all is the ultimate form of "infrastructure," is everywhere. These systems' hope for smart management — the hope that we might monitor, protect, and deploy these systems with complete intelligence — will depend entirely on a ubiquitous, instantaneous, and reliable communications network.

The plaintiffs' product market consists of wireless networks for very wide-area coverage systems. They hope to cover long transport corridors and extensive energy grids (from production to distribution to end-users). To be cost-effective and as close to error-free as possible, their networks require low-range, exclusive, greenfield (unused) spectrum. This "market" effectively belongs to a larger, emerging market best characterized as an "Internet of things." Wireless communications will connect all of the major objects involved in delivering transport, energy, and environmental services. The larger "Internet of things" comprises billions of smaller items, such as consumer products, other logistics, smart homes and places, etc.

The state of the AMTS market — viewed from any geographic or product-based perspective — reflects the deplorably anticompetitive effects of the conspiracy that Mobex and PSI have conducted. Neither Mobex nor PSI has spurred competition among the independently owned and independently controlled legal entities taking part in those operations. There has been no competition at all between Mobex and PSI. The economic stasis within this market is contrary to the regulatory expectation that the AMTS market, along with all other markets based on commercial mobile radio services, should and would be competitive.

The defendants' cooperation extended to their actions before the FCC. In order to hoard the site-based AMTS licenses under their control, Mobex and PSI

have made a practice of jointly petitioning the FCC. To keep stations that otherwise would have been automatically terminated under FCC rules, Mobex and PSI filed false reports of station construction. They used the same false language, to such an extent and over such a long period of time, that the linguistic similarity could not have been coincidental. Mobex and PSI's pattern of cooperation squelches competition in applications for site-based AMTS licenses and in the FCC's auctions of geographic AMTS licenses. For the purpose of satisfying the FCC's requirement that AMTS licensees disclose a controlling interest in any licensed legal entity must be disclosed, each defendant clearly and repeatedly represented to the FCC that it was an independent legal entity, and not an "affiliate." Before the FCC, each defendant has described itself as a distinct legal entity, controlled independently from each other and from any other entity. Each defendant except but Mobex has asserts that it is solely owned by an individual, natural person. These facts defeat any suggestion that defendants could escape section 1 liability by satisfying the intraenterprise conspiracy doctrine. *See Texaco, Inc. v. Dagher*, 547 U.S. 1, 6 (2006); *Copperweld*, 467 U.S. at 771.

The defendants inflicted much of their damage to competition through false, fraudulent, or deceptive filings before the Federal Communications Commission. Antitrust law does privilege genuine efforts to petition government for redress, even where those efforts are calculated to yield legislation, adjudication, or regulatory policy that harms a competitor. *See Eastern Railroad Presidents Conference v. Noerr Motor Freight, Inc.*, 365 U.S. 127, 135 (1961); *United Mine Workers v. Pennington*, 381 U.S. 657, 670 (1965). By the same token, the Supreme Court has never sheltered activity that is "ostensibly directed toward influencing governmental action" but in reality is "a mere sham to cover what is actually nothing more than an attempt to interfere directly with the business relationships of a competitor." *Noerr*, 365 U.S. at 144.

The acts of the defendants in this litigation are strikingly similar to the anticompetitive conduct exposed in *California Motor Transport Co. v. Trucking Unlimited*, 404 U.S. 508 (1972). In *California Motor Transport*, one group of highway carriers sued another group of carriers for antitrust violations. The plaintiff carriers, all based in California, alleged that their interstate rivals had conspired to institute state and federal proceedings "with and without probable cause, and regardless of the merits of the cases" in order to defeat the in-state carriers' efforts to acquire operating rights. *Id.* at 512. The Supreme Court

condemned the defendants' efforts, which "effectively barr[ed]" the in-state carriers "from access to the agencies and courts." *Id.* at 513.

The anticompetitive potential of a pattern and practice as extensive as the defendants' campaign of deception warrants serious scrutiny under the antitrust laws. *Cf. Grip-Pak, Inc. v. Illinois Tool Works, Inc.*, 694 F.2d 466 (1982) (Posner, J.) (alleging violations of the Sherman and Clayton Acts comprising a comprehensive scheme to monopolize a market by, *inter alia*, buying patents, threatening meritless litigation, and filing a fraudulent patent application), *cert. denied*, 461 U.S. 958 (1983). The defendants in this case most certainly appear to have waged a prolonged campaign of deception before the FCC that was both "objectively baseless" (in the sense that no reasonable licensee could realistically expect that conduct like that of Mobex and PSI would be treated favorably by the FCC), *Professional Real Estate Investors, Inc. v. Columbia Pictures Industries, Inc.*, 508 U.S. 49, 59 (1993), and "subjective[ly] motivat[ed]" by the defendants' desire "to interfere directly with the business relationships" of the plaintiffs as their competitors, *id.* at 60-61 (quoting *Noerr*, 381 U.S. at 144). In like vein, the Supreme Court has recognized that fraudulent or abusive use of federal legal process may give rise to a violation of the Sherman Act. In *Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp.*, 382 U.S. 172 (1965), the Supreme Court held that the holder of a patent procured by fraud on the Patent and Trademark Office violate the Sherman Act when it undertook to enforce that fraudulently procured patent. *See id.* at 174; *cf. Israel v. Baxter Laboratories, Inc.*, 466 F.2d 272 (D.C. Cir. 1972) (involving misrepresentations to the Food and Drug Administration as part of the FDA's process for approving a pharmaceutical drug). In similar fashion, federal communications law and antitrust law work in concert to address anticompetitive practices arising from deceptive abuse of federal regulatory law. In addition to the *Jefferson Radio* doctrine, which forbids transfer or assignment of a license whose holder's deceptive acts remain subject to FCC investigation and evaluation, *see Jefferson Radio Co. v. FCC*, 340 F.2d 783 (D.C. Cir. 1964), the Communications Act of 1934 specifically authorizes a federal court to revoke FCC licenses as a remedy for antitrust violations perpetrated through misuse of those licenses. *See* 47 U.S.C. § 313; *United States v. Radio Corp. of Am.*, 358 U.S. 334 (1959).

At an absolute minimum, defendants perpetrated a long series of *misrepresentations* through their filings before the FCC. Whatever the Supreme Court's willingness to "condone[]" misleading statements made "in the political



arena,” “[m]isrepresentations ... are not immunized when used in the adjudicatory process.” *California Motor Transport*, 404 U.S. at 513. “[U]nethical and deceptive practices can constitute abuses of administrative or judicial processes that may result in antitrust violations.” *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 500 (1988). Communications regulation by the FCC takes place in a highly stylized venue for official information-gathering and decisionmaking. As official decisionmaking becomes more formal, we “more readily” regard unethical conduct such as that of the defendants “as improper and [even] reprehensible.” 1 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 203e, at 169 (2d ed. 2000). Misrepresenting the contours of a site-based AMTS operation, let alone lying about its very existence, “threatens the fair and impartial” management of communications markets by the FCC. *Clipper Express v. Rocky Mountain Motor Tariff Bureau, Inc.*, 690 F.2d 1240, 1261 (9th Cir. 1982). At heart, the FCC’s rules and orders are designed to enable incumbent AMTS licensees to conduct site-based operations during an orderly introduction of market-based spectrum allocation through competitive auctions of geographic AMTS licenses. The defendants’ misrepresentations corrupt a system that the FCC contemplates as a balanced way of sheltering site-based AMTS operations during a technologically driven, industry-wide transition overseen by the FCC. These defendants’ “known falsehoods” consequently deserve no shelter from condemnation under the antitrust laws. *Whelan v. Abell*, 48 F.3d 1247, 1254 (D.C. Cir. 1995).

What the defendants have perpetrated in this case appears to be a deliberate pattern of abusing the Communications Act and its implementation by the FCC for the conspiratorial, anticompetitive purpose of crippling the plaintiffs and their goal of assembling the nationwide, ubiquitous wireless communications needed to facilitate any number of smart infrastructure networks. The case of *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973), involved a comparable instance in which one competitor in a hotly contested market may have used legal process “as part of a larger program to control a market and to interfere with a competitor’s financing.” *Professional Real Estate Investors*, 508 U.S. at 73 (Stevens, J., concurring in the judgment). After rendering its opinion in *Otter Tail*, the Supreme Court remanded the case with instructions for the the district court to reexamine an incumbent electric utility’s pattern of litigation, which allegedly “had the purpose of delaying and preventing the establishment” of competitors in light of the high court’s intervening decision in *California*

*Motor Transport. Otter Tail*, 410 U.S. at 379. On remand, the district court concluded that “the repetitive use of litigation by Otter Tail was timed and designed principally to prevent the establishment of municipal electric systems.” *United States v. Otter Tail Power Co.*, 360 F. Supp. 451, 451-52 (D. Minn. 1973), *aff’d without opinion*, 417 U.S. 901 (1974).

Ultimately, the integrity of the FCC's decisionmaking process hinges almost entirely on information supplied by the entities that the Commission regulates. *Cf. Armstrong Surgical Ctr., Inc. v. Armstrong County Memorial Hosp.*, 185 F.3d 154, 164 n.8 (3d Cir. 1999). When parties such as the defendants lie or otherwise deceive or mislead the FCC, such dishonesty corrupts FCC policy. To the extent that such dishonesty also inflicts harm to competition as part of a contract, combination, or conspiracy to restrain trade, it deserves to be condemned under section 1 of the Sherman Act.

#### IV. CONCLUSION

I believe that the plaintiffs in *Havens v. Mobex* have more than met their obligations, at this early stage of the litigation, to demonstrate how the defendants have violated section 1 of the Sherman Act. The plaintiffs have satisfied all of the elements of a section 1 claim, from the existence of a conspiracy to anticompetitive injury to a defined geographic and product market caused by defendants' misconduct. Neither preemption nor antitrust injury nor any other defense insulates the defendants from Sherman Act liability for their concerted efforts to hinder and possibly even destroy the plaintiffs' efforts to acquire and use AMTS spectrum for the purpose of building a nationwide, ubiquitous wireless communications network in support of smart infrastructure and environment systems.

Respectfully submitted,

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